BEFORE THE
ILLINOIS COMMERCE COMMISSION

Request for Public Comment Concerning the Implementation of Governor Blagojevich's proposal for a Sustainable Energy Plan	**RESPONDANT:** Harmony Funding Bob Babcock 630.417.0042 BobBabcock@ameritech.net

COMMENTS OF
Harmony Funding

Harmony Funding respectfully submits the following comments to the Illinois Commerce Commission's (ICC) in response to the Request for Public Comments Concerning the Implementation of Governor Blagojevich's proposal for a Sustainable Energy Plan for Illinois (the Plan).

Introduction

Harmony Funding is a company that matches funding sources with the needs of homeowners and businesses for many purposes ranging from acquisition to debt re-structuring to new initiatives. We have taken a strong interest in energy efficient measures because we believe this to be an important part of our clients' financial health, the health of our economy, and the health of the general physical environment that includes extensive geo-political implications. To this end we have networked with a wide array of organizations: mortgage companies, banks, contractors, manufacturers, suppliers, energy measurement professionals, advocacy groups, etc. We are not experts in the energy field, but strong advocates of the technologies.

Discussion

Unless I'm mistaken, there seem to be a number of holes in the plan as presented in the document on the web at http://www.icc.state.il.us/ec/docs/050217ecGovEnergy2.pdf. While the effort toward alternative sustainable technologies is admirable, the focus is solely on the

centralized production of electricity and replacing the traditional methods that require nuclear or fossil fuels with wind technologies. This is insufficient in addressing the problem.

Specifics are absent on “demand reduction”. There is no mention of geothermal heat pumps and solar energy technologies, methodologies for determining achieved reduction levels, development of energy efficient building codes, financing, impact of and need for de-centralization of energy production, and marketing.

DEMAND REDUCTION

Demand reduction can be achieved in multiple ways and should be addressed accordingly. The savings in energy costs (read “usage”) can be substantial – sometimes as much as 70%. A strong focus should be on conservation and efficiency. This must have a level of quantifiability that justifies special financing arrangements that should constitute part of the marketing effort that will be described elsewhere here in this response.

Conservation – Building “envelopes” in most of the structures in Illinois (residential and commercial properties) are similar to sieves in the way they leak air. Tightening the envelope means much more than dealing with windows and doors and insulation. Illinois has a fledgling organization of energy usage professionals, the Illinois Association of Energy Raters (http://www.ilenergyraters.org), whose members not only are well trained in the measurement of energy leakage in buildings but also the technologies and remedies necessary to improve energy efficiency. The development and use of an army of energy professionals like these is critical to a successful demand reduction program. Without them there is no quantification of results necessary for proper administration of financing and no specific individual guidance in remedial strategies.

Replacement Technology – Geothermal heat pump technology provides an excellent source for demand reduction. While eliminating the need for natural gas for heating (including domestic hot water), it also provides exceptional efficiency during the months when air conditioning is needed. This is applicable in virtually any environment from single family homes through high-rise office or condominium buildings to standard industrial environments. Anecdotal case

examples provided below will indicate the savings. One extra benefit of geothermal heat pumps is the elimination of the fire and explosive hazards of the natural gas delivery system along with the carbon monoxide dangers in homes.

Anecdotal Case Examples: Jason and Jeannie **Plummer's home** – In 2004 the Plummer's had new windows, doors and insulated siding installed on their home in unincorporated Glen Ellyn. They also replaced the electric baseboard heat with a WaterFurnace geothermal system installed by Advanced GeoThermal Plumbing & Heating of Elgin, Illinois. Prior to this, the Plummers had no air conditioning. While the building envelope was tightened some with the external renovations, they have not yet had a blower door test analysis performed to locate energy leakage and are in the process of adding or replacing insulation in the exterior walls. Due to the fact that this home was never set up for natural gas usage, it provides a more "pure" example of demand reduction through conservation and the use of geo-thermal as a replacement technology. The attached ComEd Electric Bill usage profile shows a 60% reduction in electricity usage per degree differential between indoor and outdoor temperatures.

Dypold home – In 2003, Dirk Dypold retro-fitted his 2800 s.f. Elgin home with a geothermal heat pump system that included radiant heating in the floor. His total annual electric utility costs for heating, air conditioning and domestic hot water has dropped to about $565.

Wisconsin Schools – A small school district in Wisconsin comprising an elementary school, middle school and a high school retro-fitted for geothermal at a cost of approximately $450,000 in 2003 with savings of approximately $125,000 annually. In Fond du Lac, the schools are similarly saving $290,000 in annual operating costs.

DE-CENTRALIZATION OF ENERGY PRODUCTION

The electric "grid" poses both economic and homeland security issues. Should it fail (as it historically has) the financial impact is great. In these days of terrorist threats, attacks on power plants can at least be financially disruptive and at worst the cause of hundreds of thousands of deaths and illness in the general population. It is a vulnerability that we can eventually totally avoid altogether.

However, we can start to generate energy on location now. Advances in **Solar thermal** technology have greatly augmented traditional natural gas and/or electricity as a source for heating water in high demand commercial applications. Solar panels installed in 2003 on a Laundromat rooftop in Berwyn produce approximately 60% of the hot water needed.

Similar advances in **wind turbine** technology (www.aerotecture.com) have brought the application into the urban environment for energy production at low wind speeds.

Solar photo-voltaic panels on rooftops in urban areas and as solar farms in rural areas can feed the grid or even become the sole source for electricity with battery installations.

FINANCING

This is key to the success of a sustainable energy program, and can actually speed the effective demand reduction. We recommend that the State of Illinois, through bond initiatives, create financing for energy efficient renovations, retro-fitting or new construction for residential and business/commercial/industrial applications. The utilities should be given credits toward mandated sustainable energy programs when these bonds are purchased. Similar underwriting guidelines currently used in residential and business/commercial/industrial applications should be used in order to ensure repayment.

Energy Measurement Professionals (like those of the Illinois Energy Raters Association) should be employed to assure proper application of construction materials and systems, with statements of energy use reduction provided as part of the justification for funding.

MARKETING

State issued bonds would not have taxable interest. Therefore, the rates would be lower than that found in the general market. This will provide a strong incentive to homeowners and the business community to embrace energy efficiency. The bond market should embrace these debt instruments if they are backed by the state and good common sense approaches to energy management. Remember, the costs of the energy saving initiatives usually can be recovered in a five to fifteen year period. As often as possible, the loans should be secured by real estate. So as

not to compete with mortgage companies and banks, financing should be administered and marketed by those institutions rather than the state of Illinois.

CONCLUSION

We are told that the people of Illinois spend over $30 billion annually on energy. In this commentary, it is shown how Illinoisans can save 60% or more on energy consumption. Imagine just a 10% in reduction of energy costs. What would $3 billion do to our economy? How many jobs would that represent?

Harmony Funding supports a focus on immediate energy demand reduction through the use of geothermal heat pump retrofitting of existing structures and support of efficiency initiatives similar to those supported in the U.S. Environmental Protection Agency's EnergyStar program. Data gathering that indicates the demand reduction levels with recommendations for achieving those reductions should be performed by Energy Measurement Professionals following guidelines similar to those promulgated by the Residential Energy Services Network (http://www.natresnet.org). Discount financing can be provided through state bonds and will serve as part of the incentive for taking energy efficient measures in new construction and/or renovations. Of course, these should all be guided by adjustments in the Building Codes.

There are still more possibilities than those suggest here, but we believe this will be a good start.

Respectfully submitted this 9th day of March, 2005,

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